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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/847,322 | 05/03/2001 | Rex A. Nisbet | 1378.0030000 | 5586 |

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| EXAMINER | |
|---|---|
| TORRES, MARCOS L | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2683 | 7 |

DATE MAILED: 04/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/847,322 | NISBET, REX A. | |
| | Examiner | Art Unit | |
| | Marcos L Torres | 2683 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *22 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Talarmo in view of Kumaki.

As to claim 1, Talarmo discloses a base station for a mobile radio system (see col. 1, lines 8-10), including: a plurality of repeaters that provide respective radio channels (see col. 8, lines 58-65); a station controller connected to each repeater; and a radio antenna system connected to the repeaters (see col. 9, lines 4-6); wherein the repeaters provide a control channel and a plurality of traffic channels for mobile users,

with allocation of the control channel being varied among the traffic channels (see col. 9, lines 7-31). Talarmo does not specifically discloses that the re-allocation is done proactively. Kumaki discloses allocating a control channel in advance (see col. 14, lines 19-21). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine both references for an enhanced interference reduction for the simple purpose of having a clear communication.

As to claim 5, Talarmo discloses a base station wherein: allocation of the control channel among the repeaters is determined by the station controller (see col. 9, lines 4-22).

Regarding claim 11 is the corresponding method claims of apparatus claims 1. Therefore, claim 11 is rejected for the same reason shown above.

5. Claims 3-4, 7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Talarmo in view of Kumaki as applied to claims 1, 5 and 11 above, and further in view of Hagio.

As to claims 3, 7 and 9, Talarmo discloses the method wherein the base station: allocates the control channel and a plurality of traffic channel (see col. 9, lines 7-31). Talarmo do not specifically discloses that the control channel is changed periodically or non-periodically among the repeaters in a random process. Hagio discloses that the control channel is changed periodically among the repeaters (see constitution). Talarmo does not specifically discloses that the re-allocation is done proactively. Kumaki discloses allocating a control channel in advance (see col. 14, lines 19-21)Therefore, it

would have been obvious to one of the ordinary skill in the art at the time of the invention to change the control channel in order to avoid interference.

As to claims 4 and 10, Talarmo discloses a base station wherein: each repeater normally provides a traffic channel and the control channel is changed among the repeaters according to a predetermined process (see col. 9, lines 7-31). Hagio discloses changing the control channel intermittently (see constitution). Talarmo or Hagio do not specifically discloses skipping those repeaters at which the traffic channel is busy. However, OFFICIAL NOTICE is taken that using free channel and skipping busy channel is a common and well-known technique. Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to skip a busy channel and use a free channel in order to avoid interference.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Talarmo in view of Kumaki as applied to claims 1, 5 and 11 above, and further in view of Newberg.

As to claim 6, Talarmo discloses a base station wherein: each repeater includes allocation of the control channel from one repeater to another (see col. 9, lines 7-31). Talarmo do not specifically disclose that respective channel controllers determine the channel allocation. Newberg discloses repeater, which includes a controller (see col. 3, line 60 – col. 4, line 9). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings to have an intelligent repeater that uses free channels for an interference free communication.

7. Claim 2, 8 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Talarmo in view of Kumaki and further in view of Hagio as applied to claims 3-4, 7 and 9-10 above, and further in view of Mullins.

As to claims 2, 8 and 12-13, Talarmo discloses everything claimed as explained above except for a method wherein: the predetermined process includes a round robin poll of traffic channels to locate a channel not currently busy with traffic. Hagio discloses changing the control channel intermittently (see constitution). Mullins discloses the method wherein: the predetermined process includes a round robin poll of traffic channels to locate a channel not currently busy with traffic (see par. 0079). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings for the simple purpose of selecting a channel without interference.

As to claims 14-20, Talarmo discloses a radio network including a base station (see col. 1, lines 8-11).

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any response to this Office Action should be mailed to:

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Or faxed to:

(703) 703-872-9306

For formal communication intended for entry, informal communication or draft communication; in the case of informal or draft communication, please label "PROPOSED" or "DRAFT"

Hand delivered responses should be brought to:

Crystal Park II
2121 Crystal Drive
Arlington, VA
Sixth Floor (Receptionist)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcos L Torres whose telephone number is 703-305-1478. The examiner can normally be reached on 8:00am-5:30pm alt. friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William G Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marcos L Torres
Examiner
Art Unit 2683

Mlt

WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600